

WHAT IS CLAIMED IS:

1. A position information management system managing position information of a mobile body, comprising:

5 a terminal for measuring the position of the mobile body, encrypting the measured position information by predetermined encryption means and transmitting the encrypted position information; and

10 a position recording apparatus for receiving the position information and recording the position information in a state where it is encrypted.

2. The position information management system according to claim 1, wherein

15 the position recording apparatus transmits to the terminal the encrypted position information of the mobile body corresponding to the terminal, based on a request from the terminal, and wherein

16 the terminal decrypts the encrypted position

20 information using the decryption data that the terminal retains.

3. The position information management system according to claim 1, wherein

25 when the position recording apparatus has received predetermined permission information from a first terminal, the position recording apparatus transmits the encrypted

position information of the mobile body corresponding to the first terminal, based on a request from a second terminal, and wherein

when the second terminal has received the decryption
5 data retained by the first terminal from the first terminal, the second terminal can decrypt the encrypted position information.

4. The position information management system according
10 to claim 1, wherein

when the position recording apparatus has received predetermined permission information from the terminal, the position recording apparatus transmits the encrypted position information of a mobile body corresponding to the
15 terminal, to a position information service center, based on a request from the position information service center providing predetermined services to the terminal, and wherein

when the position information service center has
20 received the decryption data retained by the terminal from the terminal, the position information service center decrypts the encrypted position information, executes a predetermined process for the decrypted position information and transmits the result of the process to the
25 terminal.

5. The position information management system according

to claim 1, wherein

when the position recording apparatus has received the decryption data retained by the terminal from the terminal, the position recording apparatus, based on a request from the terminal, decrypts the encrypted position information of a mobile body corresponding to the terminal using the decryption data, executes a predetermined process for the decrypted position information and transmits the result of the process to the terminal.

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6. The position information management system according to claim 1, wherein

when the position recording apparatus has received the decryption data retained by the terminal from the terminal, the position recording apparatus, based on a request from the terminal, decrypts the encrypted position information of a mobile body corresponding to the terminal using the decryption data and transmits the decrypted position information to a position information service center providing predetermined services to the terminal, and wherein

the position information service center executes a predetermined process for the decrypted position information and transmits the result of the process to the position recording apparatus, and wherein

the position recording apparatus transmits the result of the process to the terminal.

7. The position information management system according to claim 1, wherein

when the position recording apparatus has received
5 predetermined permission information from the terminal,
the position recording apparatus, based on a request from
a third party, decrypts the encrypted position information
of a mobile body corresponding to the terminal using the
decryption data, executes a predetermined process for the
10 decrypted position information and transmits the result
of the process to the third party.

8. The position information management system according to claim 7, wherein

15 the predetermined process is a process for responding
to a query relating to a mobile body corresponding to the
terminal.

9. The position information management system according
20 to claim 8, wherein

the position recording center has a guarantee function
for the response.

10. The position information management system according
25 to claim 8, wherein

the query is at least one of "where is the current
position of the mobile body", "whether the mobile body

is/was at a designated place", "whether the mobile body
is/was at a designated place on a designated date at a
designated time", "where is the position at which the mobile
body was on a designated date at a designated time" and
5 "on which date and at what time the mobile body was at a
designated place".

11. The position information management system according
to claim 1, wherein

10 the terminal comprises a plurality of encryption means,
and is capable of switching the encryption means for
encrypting the position information, based on the position
of the terminal and/or the time, or on an instruction from
a mobile body.

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12. The position information management system according
to claim 1, wherein

the terminal comprises a personal authentication
means for a mobile body, and wherein

20 when a personal authentication is successfully
completed, the terminal can measure the position of the
mobile body, encrypt the measured position information with
predetermined encryption means and transmit the encrypted
position information.

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13. The position information management system according
to claim 1, wherein

when the position recording apparatus receives the decryption data from the terminal and decrypts the encrypted position information using the decryption data,

the position recording apparatus stores in a temporary
5 memory the decryption data, the decrypted position information and the result of a predetermined process executed for the decrypted position information and erases from the temporary memory the decryption data, the decrypted position information and the result of the
10 process after transmitting the result of the process to the terminal.

14. The position information management system according to claim 13, wherein

15 the position recording apparatus executes the predetermined process.

15. The position information management system according to claim 13, wherein

20 the position recording apparatus transmits the decrypted position information to a position information service center providing predetermined services utilizing the position information and receives from the position information service center the result of the predetermined
25 process executed by the position information service center.

16. A terminal comprising:

a measuring unit for measuring the position of a mobile body;

an encryption unit for encrypting the measured
5 position information by predetermined encryption means;

a communication unit for transmitting the encrypted position information; and

decryption unit having decryption data for decrypting
the encrypted position information, the decryption unit
10 when receiving the position information from the
communication unit, decrypting the received position
information using the decryption data.

17. A position recording apparatus comprising:

15 a communication for receiving encrypted position information relating to the position of at least one mobile body, from a terminal of the mobile body; and

a database in which the position information is recorded in the encrypted state.

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18. The position recording apparatus according to claim
17, further comprising:

an acquisition unit for acquiring the position information recorded in the database, in response to a
25 predetermined request, wherein

the communication unit transmits the acquired position information from the communication unit in the

encrypted state.

19. The position recording apparatus according to claim 17, further comprising:

5 an acquisition unit for acquiring the position information recorded in the database, in response to a predetermined request; and

 a decryption unit for decrypting the acquired encrypted position information, wherein

10 when the decryption unit receives, together with the request, the decryption data for decrypting the encrypted position information, the decryption unit decrypts the acquired encrypted position information and transmits the decrypted position information.

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20. The position recording apparatus according to claim 17, further comprising:

 an acquisition unit for acquiring the position information recorded in the database, in response to a 20 predetermined request;

 a decryption unit for decrypting the acquired encrypted position information; and

 a processing unit for executing a predetermined process for the decrypted position information, wherein

25 when the decryption unit receives, together with the request, the decryption data for decrypting the encrypted position information, the decryption unit decrypts the

acquired encrypted position information and the processing unit transmits the result of the predetermined process executed for the decrypted position information.

5 21. The position recording apparatus according to claim 20, further comprising:

a temporary memory for storing the decryption data, the decrypted position information and the result of the process; and

10 an erasing unit for erasing the decryption data, the decrypted position information and the result of the process from the temporary memory after transmitting the result of the process.